



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/312,479	05/17/1999	ROBERT J. HENNICK	283_237.10CPA	2665

20874 7590 01/15/2008  
MARJAMA MULDOON BLASIAK & SULLIVAN LLP  
250 SOUTH CLINTON STREET  
SUITE 300  
SYRACUSE, NY 13202

EXAMINER
----------

LUU, THANH X

ART UNIT	PAPER NUMBER
----------	--------------

2878

MAIL DATE	DELIVERY MODE
-----------	---------------

01/15/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

09/312,479

Applicant(s)

HENNICK ET AL.

Examiner

Thanh X. Luu

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 73-79 and 109-127 is/are pending in the application.
- 4a) Of the above claim(s) 121-127 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 73-79 and 109-120 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

This Office Action is in response to amendments and remarks filed November 5, 2007. Claims 73-79 and 109-127 are currently pending.

#### ***Election/Restrictions***

1. Newly submitted claims 121-127 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the previous claims do not mention alignment indicated by an electrical signal.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 121-127 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 76-79 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claims 76-79, "said at least one solderable surface" lacks proper antecedent basis.

#### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 73-75, 77 and 78 are rejected under 35 U.S.C. 102(b) as being anticipated by Azuma et al. (JP 62-139465), see also translation entitled "Method for precisely assembling an image sensor".

Regarding claims 73-75, 77 and 78, Azuma et al. disclose (see Figs.) an imaging device, comprising: an image sensor subassembly including an image sensor (6) mounted on a printed circuit board (8); a substantially rigid optical subassembly (7), the optical subassembly including an optical element (5) disposed on a substantially rigid member; a solderable surface (rod 10; hole; see Fig. 9) formed on each of the optical subassembly and the circuit board defining a pair of solder receiving interface; and a solder material (solder 20; see Fig. 9) for bonding the subassemblies disposed between the solder-receiving interface. Azuma et al. also disclose (see Fig. 4) the device encapsulated in a housing (of the image reader), the device partially defining a feed path (of the web (2)). The housing of the image reader inherently serves as a handle.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 76 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azuma et al. in view of DelGuidice et al. (U.S. Patent 4,721,473).

Regarding claims 76 and 79, Azuma et al. disclose the claimed invention as set forth above. Azuma et al. do not specifically disclose an irregular configuration having increased surface area as claimed. DelGuidice et al. teach (see col. 1, lines 60-65) that an irregular solderable surface having increased surface area as claimed improves solder joint strength. It is also well known that threaded screws provide an increased surface area. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide such an irregular surface or a threaded screw in the apparatus of Azuma et al. in view of DelGuidice et al. for improved strength of the solder joint as taught.

9. Claims 109-116, 118 and 119 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azuma et al. in view of Reed (U.S. Patent 4,823,277).

Regarding claims 109-116, 118 and 119, Azuma et al. disclose the claimed invention as set forth above. Azuma et al. do not disclose a metal plated hole as claimed. Reed teaches (see col. 2, lines 1-14) the advantageous of a circuit board having a metal plated through hole as claimed. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide such a through hole in the apparatus of Azuma et al. in view of Reed for more uniform solder flow and improved strength of the solder joint as taught.

10. Claims 117 and 120 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azuma et al. in view of Reed and further in view of DelGuidice et al.

Regarding claims 117 and 120, Azuma et al. and Reed disclose the claimed invention as set forth above. Azuma et al. and Reed do not specifically disclose an irregular configuration having increased surface area as claimed. DelGuidice et al. teach (see col. 1, lines 60-65) that an irregular solderable surface having increased surface area as claimed improves solder joint strength. It is also well known that threaded screws provide an increased surface area. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide such an irregular surface or a threaded screw in the apparatus of Azuma et al. in view of Reed and DelGuidice et al. for improved strength of the solder joint as taught.

#### ***Response to Arguments***

11. Applicant's arguments filed November 5, 2007 have been fully considered but they are not persuasive.

12. Applicant fails to assert how the invention is patentable over Azuma et al. Therefore, as set forth above, this rejection is proper.

#### ***Conclusion***

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh X. Luu whose telephone number is 571-272-2441. The examiner can normally be reached on M-F 6:00AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thanh X Luu/  
Primary Examiner

Application/Control Number:  
09/312,479  
Art Unit: 2878

Page 7

Art Unit 2878

01/2008